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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,444	10/22/2003	Paul E. Denney	LOMASR.026A	8101
20995	7590	02/08/2006	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			EVANS, FANNIE L	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2877	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/691,444	Applicant(s) DENNEY ET AL	
	Examiner F. L. Evans	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 8-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on October 22, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0104, 1204, 0305, 0405, 1005</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

The Preliminary Amendment

Receipt is acknowledged of the preliminary amendment filed on April 26, 2004.

The Information Disclosure Statements

The prior art cited in the information disclosure statements filed on January 4, 2004, December 23, 2004, March 17, 2005, April 4, 2005 and October 31, 2005 has been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 7 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Alexander (US 5,847,825).

The structure of the claimed detection system is disclosed by Alexander. Alexander discloses a detection system for use during irradiation of an interaction region of a structure with laser light, the structure comprising embedded material, the detection system comprising a focusing lens (14) positioned to receive light emitted from the interaction region (13); an optical fiber (15) optically coupled to the focusing lens (14) to receive light from the focusing lens (14); and a spectrometer (17) optically coupled to the optical fiber (15) to receive light from the optical fiber (15), the spectrometer adapted for analysis of the light for indications of the embedded material within the interaction region. The light sensor of the spectrometer is a CCD camera system (18). The focusing lens (14) is off-axis with the light impinging on the interaction region. Applicant's attention is directed to Alexander in its entirety with particular attention directed to Fig. 2 and the text pertaining thereto.

Claims 1 and 6 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Theriault et al (US 6,147,754).

The structure of the claimed detection system is disclosed by Theriault et al. Theriault et al disclose a detection system for use during irradiation of an interaction region of a structure with laser light, the structure comprising embedded material, the detection system comprising a focusing lens (214) positioned to receive light emitted from the interaction region (column 5, lines 9-11); an optical fiber (106) optically coupled to the focusing lens (214) to receive light from the focusing lens (214); and a spectrometer (114) optically coupled to the optical fiber (106) to receive light from the optical fiber (106), the spectrometer adapted for analysis of the light for indications of the embedded material within the interaction region. The focusing lens (214) is coaxial with the light impinging on the interaction region. Applicant's attention is directed to Theriault et al in its.

Claims 11 and 12 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Satoru et al (JP 2002-296183).

Satoru et al disclose a detection system for use during irradiation of an interaction region of a structure with laser light (6), the structure comprising embedded material (reinforcement bars), the detection system comprising means for focusing light emitted from the interaction region (condenser lens, etc. - paragraph [0014]); means for separating the focussed light into a spectrum of wavelengths (8); and means (12) for analyzing at least a portion of the spectrum for indications of embedded material within the interaction region. The method of claim 12 is performed by the disclosed system of Satoru. Applicant's attention is directed to Satoru et al in its entirety with particular attention directed to paragraphs [0007], [0009] and [0014].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness

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rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Alexander (US 5,847,825) in view of Jacobowitz et al (US 4,060,327).

Alexander discloses a detection system for use during irradiation of an interaction region of a structure with a laser beam that has essentially every claimed structural feature except the neutral density filter adapted to reduce the light received by the spectrometer.

Jacobowitz et al disclose the use of a neutral density filter (24) to reduce the light received by a spectrometer (12).

At the time the invention was made it would have been obvious to use a neutral density filter to reduce the light received by the spectrometer (17) of Alexander because the use of such a filter would have prevented saturation of the detector (18) of the spectrometer of Alexander. Applicant's attention is directed to lines 49 and 50 of column 3.

Additional Prior Art

Ryoji et al (JP 2002-5899) disclose the use of laser spectroscopy for inspecting concrete.

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Allowable Subject Matter

Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if claim 8 is rewritten in independent form including all of the limitations of the base claim and any intervening claims.


As to dependent claim 8, the prior art of record, taken alone or in combination, fails to disclose or render obvious a detection system for use during irradiation of an interaction region of a structure with laser light comprising the spectrometer adapted to analyze light having wavelengths of approximately 592 nanometers for indications of rebar within the interaction region, in combination with the rest of the limitations of the claim.

Fax/Telephone Numbers

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (571) 272-2414.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


F. L. EVANS
PRIMARY EXAMINER
ART UNIT 2877

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February 5, 2006